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Increasing early and exclusive breastfeeding in rural Uttar Pradesh: Implications for behavior change communication

Background

Early breastfeeding is defined as initiation of breastfeeding within one hour of birth; exclusive breastfeeding is feeding the infant only breast milk without the addition of any other food, milk, fluid or water¹. Evidence suggests that early breastfeeding, if implemented widely, can reduce the neonatal mortality rate by 20 percent; moreover, early breastfeeding, coupled with good breastfeeding skills, could positively influence the practice of exclusive breastfeeding².

NFHS-3 data indicate that in 2005-06 around 7 percent of women aged 15-34 years in rural Uttar Pradesh (UP) had initiated breastfeeding within one hour of delivery, indicating no change since NFHS-2 in 1998-99³. DLHS-3 (2007-08) data show that although there has been an improvement in the practice of early breastfeeding, it was only around 15 percent in UP; the data also reveal that just 8 percent of children aged 6-23 months in rural UP were exclusively breastfed till the age of 6 months.

In October 2009, the Population Council conducted a formative study in UP to determine the current status of early and exclusive breastfeeding, understand the facilitating factors and barriers in adopting the desired breastfeeding practices, and identify programmatic and behavior change communication (BCC) initiatives that could accelerate the adoption of early and exclusive breastfeeding practices. The project was funded by the Bill and Melinda Gates Foundation.

Methodology

The formative study was conducted in two phases. First, a survey was conducted

covering 4,754 households, 4,472 currently married women aged 15-34 years who had delivered a child in the last three years, 2,274 husbands, 2,372 mothers-in-law, 289 ASHAs, 284 AWWs, 161 ANMs, 316 local private practitioners, 251 panchayat members (including Village Health and Sanitation Committee members) and staff at 144 government health facilities (PHCs and CHCs) from 225 villages in 12 districts spread over the Western, Central and Eastern regions of UP. In the second phase, 308 in-depth interviews were conducted with family-level stakeholders (women, husbands and mothers-in-law), health care providers (ASHAs, AWWs, private practitioners and *dais*) and *panchayat* members to complement the information gathered in the quantitative survey. The qualitative study was conducted in 24 villages: eight villages each from three districts, one district from each of the three regions.

Key findings

Status: The Population Council study reveals that 19 percent of women initiated breastfeeding within one hour of birth of their child. The practice of early breastfeeding has been slowly increasing from 1992-93 to 2009 (Figure 1).

Figure 1: Trend in early breastfeeding in rural UP



¹Government of India. 2004. National Guideline on Infant and Young Child Feeding, <http://wcd.nic.in/national_guidelines.html> .

²L. C. Mullany et al. 2008. "Breast-feeding Patterns, Time to Initiation, and Mortality Risk among Newborns in Southern Nepal," *Journal of Nutrition*, 138, 599-603.

³Data from NFHS-1, NFHS-2, NFHS-3 and DLHS-3 presented in this policy brief are based on an analysis, conducted by the Population Council, of currently married women aged 15-34 in rural UP who had given birth in the three years preceding the survey.

⁴K. Aruldas, M.E. Khan and A. Hazra. 2010. "Increasing Early and Exclusive Breastfeeding in Rural Uttar Pradesh: Implications for Behavior Change Communication," in M.E. Khan, Gary Darmstadt, T. Usha Kiran and D. Ganju, eds. *Shaping Demand and Practices to Improve Family Health Outcomes: A Formative Study in Rural Uttar Pradesh*, New Delhi: Population Council (forthcoming).



water, particularly during summer, sometimes even within two weeks of birth. A woman said, *"I gave my child water from the fifth month. Women in the village told me to give water because the child's mouth gets dry like an adult's mouth gets dry. Nothing else is being given to the child now except breast milk."*

Barriers

Perception that breast milk is not produced immediately:

Among women who had not breastfed their child even within two hours (N=2,932), most (63 percent) reported that they had delayed initiation because breast milk is not produced immediately after delivery (Table 1). It was perceived that it takes about 2-3 days for milk to be produced in the mother's breast.

Table 1: Reasons for delay in breastfeeding

Reasons	Percent
Breast milk is not produced immediately	63
Elders' advised not to give first milk	10
Post-delivery cleaning took time	14
Woman too weak to hold the child	9
Child not given to mother	8
Delivery complications	6
Total	2,932

Note: Percentages may not add to 100 due to multiple responses.

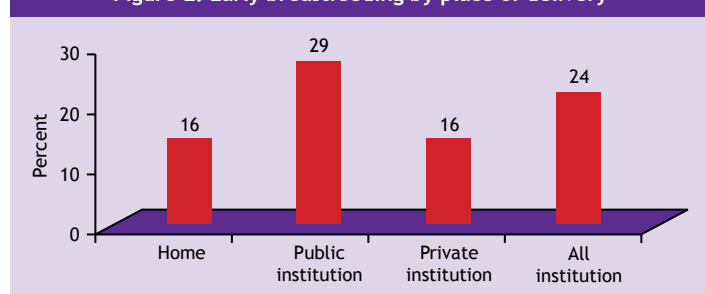
This perception is reinforced by mothers-in-law and other elder women in the family. As one woman said, *"My mother-in-law advised me to give the child honey because mother's milk does not come immediately after delivery. I listen to my mother-in-law; she is 'buzurg' [old and wise] and she knows about these things better."*

Delay due to post-delivery cleaning: Both in institutions and at home, the time taken for post-delivery cleaning delays the initiation of breastfeeding (14 percent) (Table 1). Several factors contribute to this delay. Many elders believe that without bathing, the newborn is polluted and hence cannot be put to the breast. Moreover, the child is bathed only after the cord is cut and in home deliveries, cord-cutting is sometimes delayed because the person who cuts the cord is not readily available, particularly if the delivery is at night. Thus delay in cord cutting and bathing the newborn leads to late initiation of breastfeeding. A woman said, *"Two hours after the delivery, the charman came to cut cord and bathe the child...my mother-in-law advised to bathe child because the child is dirty."*

Low or no perceived benefit of breastfeeding: Only 6 percent of women were aware that early breastfeeding has health benefits for both the mother and child. Further, women who did not feed colostrum had misconceptions that colostrum is impure (18 percent) and it harms the child (13 percent). Tradition was also reported as a reason not to feed colostrum (9 percent). A woman said: *"I did not give my first milk to the child because everyone in the village says that the yellow milk is bad. No one advised me to give the yellow milk."*

About 24 percent of women who delivered in a health facility initiated breastfeeding within one hour as compared to 16 percent who delivered at home (z test, $p < 0.001$). However, early breastfeeding even among women who deliver at a health facility is far less than desired. More women who delivered in a public health facility (29 percent) than those who delivered in a private health facility (16 percent) initiated early breastfeeding (Figure 2). Efforts by PHC staff to counsel and encourage women to breastfeed early could significantly increase adoption of this practice.

Figure 2: Early breastfeeding by place of delivery



Survey findings show that the practice of pre-lacteal feeding is still high (68 percent) in rural UP; 77 percent of women who delivered at home and 50 percent of women who delivered in an institution gave the child pre-lacteal feeds. The practice of pre-lacteal feeding and early breastfeeding are competing behaviors; the analysis reveals that 77 percent of the 834 women who breastfed their child within one hour did not give any pre-lacteal feed (χ^2 test, $p < 0.01$). This indicates that if practice of early breastfeeding is adopted, pre-lacteal feeds will decrease.

Two-thirds of women (68 percent; N=3,047) fed their newborn colostrum. A larger percentage (79 percent) of women who delivered in an institution as compared to those who delivered at home (59 percent) fed colostrum (z test, $p < 0.01$). This indicates colostrum feeding has almost become a norm of the community.

The practice of exclusive breastfeeding is limited. Only about one-quarter of children (24 percent) aged 6-23 months were exclusive breastfed till 6 months of age. Most children (70 percent) were fed water before the age of 6 months and 53 percent by the third month. Most women (87 percent) did not know that 80 percent of breast milk is water. The qualitative study shows that many families started feeding the infant

Perception that breast milk is inadequate for the child:

One-third (33 percent) of women gave animal milk, mainly goat's milk, to the child because it is believed to be "light" and gives strength. Such supplementary foods were given because women and elders in the family perceived that after 3-4 months mother's milk is not sufficient for the child. They reported that the child cried frequently, even soon after breastfeeding, because the child was still hungry. A woman said, "I have been giving my child cow's milk since the age of 2 months. I am also breastfeeding but the child remains hungry so cow's milk is also being given. My mother-in-law told me to give cow's milk because the child's stomach is not full and the child is still hungry."

A key reason, however, why a child could remain hungry is not because breast milk is insufficient but because women do not spend adequate time on breastfeeding due to the pressure of housework or aware that the milk should be exhausted from one breast before feeding from the second breast.

Low risk perception of giving supplementary food and water: Women did not perceive that children aged less than 6 months are at risk of infection if they are given supplementary food and water. Most children (70 percent) were given water because women and family members perceived that the child would be thirsty and the throat would become dry, or could even die, if not given water. A mother-in-law said, "After 15 days the child should be given water otherwise the throat becomes dry and the child feels thirsty." Women were not aware that 80 percent of breast milk is water and breast milk has all the essential nutrients required for the growth of a child.

Lack of knowledge among frontline health workers: Many frontline health workers supported the practice of exclusive breastfeeding. However, as they were not aware of the composition of breast milk and that breast milk contains 80 percent water, which is adequate for a child aged less than 6 months, they advised women to feed the child water. For example, an ASHA said, "If it is summer one should start feeding the child water from the eighth day after birth. If it is winter, then water should not be given for 2-4 months. There is some water in breast milk but I do not know how much."

Misperceptions among frontline health workers: ASHAs/AWWs/ANMs (18-37 percent) perceived that most women in the community practiced early breastfeeding. As a result, efforts to promote and reinforce the desired practice were limited. Only 23 percent of women reported receiving advice from any frontline health workers on breastfeeding.

Lack of appropriate communication/counseling aids: Only 28 percent of ASHAs reported that they had received flip-charts and 6 percent of ASHAs reported that they had received leaflets on breastfeeding for distribution. Further probing, however, shows that many ASHAs considered the module they received during training to be a flip-chart for counseling. The efforts of health workers' to counsel women and their families may remain less effective without the use of counseling aids.

Missed opportunities: Study findings show that among women who delivered at home, 68 percent had received services, such as injections, from village-level private practitioners during or soon after delivery. Moreover, many private practitioners (73 percent) reported they treat children aged 1-12 months. However, only 1 percent of women had received advice on breastfeeding from private practitioners. Clearly, there are missed opportunities for counseling on breastfeeding by private providers. While qualitative findings show that private practitioners perceive that promoting breastfeeding is the role of frontline health workers, most noted that if requested by the government, they would advise their clients with newborn children about breastfeeding practices.

Facilitating factors

Women's education and exposure to mass media: The study shows that early and exclusive breastfeeding was about one and a half times higher among women who had a secondary or higher education (OR 1.45, $p < 0.001$) and those exposed to mass media (OR 1.24, $p < 0.05$) than others.

Contact with health providers and access to services: Women who were advised on early breastfeeding were two times more likely (OR 2.27, $p < 0.001$) to adopt early breastfeeding than those who did not receive advice; about one and a half times higher among women who received at least three ANC check-ups (OR 1.62, $p < 0.001$) or delivered in an institution (OR 1.67, $p < 0.001$). Early breastfeeding was higher among women living in villages with a government health facility or anganwadi center (OR 1.28, $p < 0.05$) than others.

Similarly, as compared to others, exclusive breastfeeding was significantly higher among women who received advice on exclusive breastfeeding either during ANC or PNC (OR 1.56, $p < 0.01$), three and a half times higher if they were advised twice about breastfeeding (OR 3.48, $p < 0.01$) and if a government health facility, including an anganwadi centre, was available within the village (OR 1.4, $p < 0.05$), which is a proxy variable for interaction with frontline health workers.

ASHAs are a credible source of information on health: Many women (37 percent) reported that the ASHA is their preferred source of information on breastfeeding although



only 3 percent of women reported that the ASHA had advised them on breastfeeding. The qualitative study reveals that in villages where ASHAs have been proactive, they have been able to motivate women to adopt early breastfeeding. As a woman reported, *"The ASHA and my elder sister-in-law told me the way to breastfeed. I fed colostrum because the ASHA and my sister-in-law advised me to do so."*

Family members' are key facilitators:

Findings show that family members' support is important for encouraging the adoption of desired practices and sustaining behavior change. For example, 73 percent of husbands and 64 percent of mothers-in-law supported colostrum feeding, and 68 percent of women had adopted the practice. Qualitative findings also show that when mothers-in-law and husbands were advised by the ASHA on initiating breastfeeding within one hour, feeding colostrum and not giving pre-lacteal feeds, family members supported women to adopt these practices.

Implications for the BCC strategy

Audience segmentation: In addition to women who are the main target audience for breastfeeding, BCC efforts would also need to focus on mothers-in-law and husbands as they are key influencers in promoting the adoption of breastfeeding practices. Other population segments that need focused attention are families living in smaller villages (<1,000 population) without a health facility or ASHA as they are more disadvantaged and lack access to information as compared to families from larger villages.

Build awareness among women and family members: Messages need to focus on establishing appropriate breastfeeding techniques and the benefits of adopting early

and exclusive breastfeeding and the risks of not doing so. Special efforts are needed to create awareness on the composition of breast milk and that a child does not require water till the age of 6 months, even in summer, because 80 percent of breast milk is water.

Use IPC supported by an appropriate mix of media: The study shows that IPC by frontline health workers are effective channels for educating families and promoting breastfeeding practices. The study shows that the mass media also plays an important role in promoting these practices. This indicates with IPC as the lead mass media could play a supportive role. An appropriate mix of media channels, particularly community radio, would be effective in promoting the desired behaviors. All possible opportunities and forums in the health system should be used to counsel women and their families on breastfeeding, such as contact during ANC checkups, pregnant and lactating mothers' meetings, immunization sessions, Village Health and Nutrition Days and *saas-bahu sammelans* (mothers-in-law–daughters-in-law meetings). Local private practitioners could also be involved in promoting early and exclusive breastfeeding.

Reorientation of frontline health workers: Study findings show that frontline health workers would require reorientation as they are poorly informed about the composition of breast milk and breastfeeding techniques. It was also observed that health workers do not have any counseling aids. Providing them with counseling aids and building counseling skills on early and exclusive breastfeeding would be critical for the success of the BCC strategy. Media could also be used to build the credibility of frontline health workers as knowledgeable and reliable sources of information on breastfeeding and child health within the community.

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For additional information, contact: Population Council, Zone 5A, India Habitat Centre, Lodi Road, New Delhi 110003, or email info-india@popcouncil.org



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